REMARKS

Initially, Applicants express appreciation to the Examiner for the detailed Official Action provided. Additionally, Applicants express appreciation to the Examiner for the courtesies extended to Applicants' representative James Bonnamy and Seiji Hamada during the telephone interviews of February 22, 2011 and April 26, 2011, the substance of each telephone interview being discussed below.

Upon entry of the present paper, claims 1, 5-6, and 9 will have been amended and claims 16-25 will have been added. Thus, claims 1-3, 5-7, 9, and 14-25 will be pending in the present application, with claims 1 and 6 being in independent form. The herein-contained amendments should not be considered an acquiescence in the propriety of the outstanding rejection. Rather, the claims have been amended solely to advance prosecution of the present application to allowance. Furthermore, it is submitted that the amendments contain no prohibited new matter. Specifically, amended claims 1 and 6 and new claims 16-19 and 21-24 are submitted to be supported at least by ¶[0082], ¶[0116], ¶[0131], and ¶[0145] of corresponding U.S. Pat. Appl. Pub. No. 2007/0162707. Furthermore, new claims 20 and 25 are submitted to be supported at least by original claim 1 of the present application as filed.

Applicants discuss the above-mentioned telephone interviews and address the pending rejection below, and respectfully request reconsideration and withdrawal of the rejection together with an indication of the allowability of claims 1-3, 5-7, 9, and 14-25 (*i.e.*, all pending claims) in the next Official communication. Such action is respectfully requested and is believed to be appropriate for at least the reasons provided below.

Telephone Interview of February 22, 2011

During the telephone interview of February 22, 2011, it was generally discussed and agreed that the rejection of claims 1-3, 5-7, 9, and 14-15 of the present application under 35 U.S.C. § 103(a) as set forth in the Official Action dated November 19, 2010 was confusing and unclear. Specifically, it was discussed that the rejection identifies a reference which does not appear to have been asserted in the rejection. Furthermore, the rejection asserted that certain features of the claims are disclosed by a reference while it also asserted that that reference fails to disclose those same features. That is, at least page 4, lines 13-17 appear to be contradictory with page 5, lines 16-19.

In view of the above, the Examiner agreed to issue a Supplemental Official Action in order to clarify the rejection. The Examiner further agreed to re-start the period for reply from the mailing date of the Supplemental Official Action.

Telephone Interview of April 26, 2011

During the telephone interview of April 26, 2011, the substance of the rejection of claims 1-3, 5-7, 9, and 14-15 of the present application under 35 U.S.C. § 103(a) as set forth in the Supplemental Official Action dated February 25, 2011 was discussed.

Specifically, Applicants' representatives clarified that independent claims 1 and 6 of the present application relate to a method of recording data and a data processing apparatus. According to each independent claim a recording area of an information recording medium is managed in units of blocks, with each block including at least two clusters as units for storing data. The blocks are searched for a valid block that has at least a predetermined threshold number of unused clusters, and data is written in the valid block before being written in the searched blocks having less that the predetermined

threshold number of unused clusters. According to each independent claim, information about the predetermined threshold number of unused clusters is acquired from the information recording medium. The information indicates information for determining the predetermined threshold number of unused clusters necessary for writing data at least at a predetermined minimum speed.

In this regard, according to a non-limiting and exemplary embodiment of the present application, the information may include a class of the recording medium, a total number of clusters in each of the units, a number of free clusters in each of the units, a number of used clusters in each of the units, and/or a size of one of the blocks. Based on the information, the threshold number of free clusters may be determined for writing data at least at the predetermined minimum speed. For example, the threshold number of free clusters may be a number of free clusters that is necessary for writing data in real-time. Writing the data in the blocks having the threshold number of free clusters minimizes the number of transitions among blocks, thereby enabling the data to be written in real-time.

In the rejection of claims 1-3, 5-7, 9, and 14-15 of the present application under 35 U.S.C. § 103(a) as set forth in the Supplemental Official Action dated February 25, 2011, it is asserted that U.S. Pat. No. 5,535,369 to Wells et al. (hereinafter, "WELLS") discloses the features of independent claims 1 and 6, as recited in the claimed combinations, of acquiring information about the predetermined threshold number from the information recording medium, the information indicating information for determining the predetermined threshold number of unused clusters necessary to write the data at least at a predetermined minimum speed.

During the telephone interview, Applicants' representatives submitted that WELLS does not appear to disclose or render obvious such features. In this regard, the Examiner even acknowledged that WELLS fails to disclose or render obvious such features on page 5, lines 12-15 of the Official Action dated March 18, 2010 and on page 4, lines 12-14 of the Official Action dated August 17, 2009. To the contrary, WELLS merely appears to disclose a method of allocating memory space within a FLASH array 62 including the step of determining whether there is enough free memory in a block before writing to the block (WELLS, col. 15, lines 48-60 and col. 18, lines 36-38). According to WELLS, if the block does not have enough free memory, then another block is checked (WELLS, col. 18, lines 44-52).

During the telephone interview of April 26, 2011, the Examiner indicated that he is now interpreting WELLS as disclosing a predetermined minimum writing speed of "whether writing takes place". In other words, it appears to be asserted that WELLS discloses a predetermined minimum writing speed of any writing speed at which writing actually takes place. The Examiner further asserted that WELLS discloses that information for determining an amount of memory for writing the data at the minimum writing speed, *i.e.*, "whether writing takes place", is determined from the FLASH array. In this regard, the Examiner asserted that WELLS discloses that it is determined "whether there is enough free memory". Accordingly, the Examiner asserted that WELLS discloses that is determined "whether there is enough free memory" which indicates an amount of memory for writing data at a minimum speed, *i.e.*, "whether writing takes place", and thus, that WELLS renders obvious the above-mentioned features of independent claims 1 and 6 of the present application.

Although Applicants' representatives disagree with the Examiner's interpretation of WELLS and independent claims 1 and 6 of the present application, Applicants' representatives and the Examiner discussed possible amendments that would be appropriate in overcoming the Examiner's interpretation of WELLS and the outstanding rejection of independent claims 1 and 6 of the present application. In this regard, it was discussed and agreed that WELLS merely appears to determine whether there is enough free memory for writing data to the FLASH array. Thus, it was discussed and agreed that WELLS does not disclose or render obvious acquiring information from an information recording medium that indicates information for determining a predetermined threshold number of unused clusters necessary to write the data at least at a predetermined minimum speed, wherein the information includes at least one of a class of the information recording medium, a number of clusters of each of the searched blocks, a number of used clusters of each of the searched blocks, and a size of each of the searched blocks. In this regard, it was discussed and agreed that, based on the Examiner's present understanding of WELLS and the other applied references, amending independent claims 1 and 6 of the present application to incorporate such features would overcome the outstanding rejection.

35 U.S.C. § 103 Claim Rejections

In the outstanding Supplemental Official Action, claims 1-3, 5-7, 9, and 14-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Admitted Prior Art (hereinafter, "AAPA") in view of WELLS and U.S. Pat. No. 5,287,500 to Stoppani, Jr. (hereinafter, "STOPPANI").

Without acquiescing in the propriety of the present application and solely to expedite prosecution of the present application, upon entry of the present paper, independent claims 1 and 6 of the present application will each be amended to generally incorporate the above-mentioned features of the present application which were discussed during the telephone interview of April 26, 2011 and which were indicated to overcome the outstanding rejection. That is, independent claims 1 and 6 of the present application have each been amended to generally recite that information that includes one of a class of the information recording medium, a number of clusters of each of the searched blocks, a number of used clusters of each of the searched blocks, and a size of each of the searched blocks is acquired from the information recording medium. According to the independent claims, the information indicates information for determining the predetermined threshold number of unused clusters necessary to write the data at least at a predetermined minimum speed. Applicants respectfully submit that AAPA, WELLS, and STOPPANI, whether considered alone or together in any proper combination, fail to disclose or render obvious such features as recited in the claimed combinations of independent claims 1 and 6 of the present application.

In this regard, in the outstanding Official Action dated March 18, 2010, it is acknowledged that AAPA and STOPPANI fail to disclose the feature of independent claims 1 and 6 of the present application of acquiring information from an information recording medium that indicates information for determining a predetermined threshold number of unused clusters necessary to write data at least at a predetermined minimum speed. As such, it is submitted that AAPA and STOPPANI cannot be reasonably interpreted to disclose or render obvious the above-mentioned features of amended

independent claims 1 and 6 of the present application, as recited in the claimed combinations.

Furthermore, as discussed during the telephone interview of April 26, 2011, WELLS merely appears to disclose the step of determining whether there is enough free memory in a block before writing to the block (WELLS, col. 15, lines 48-60 and col. 18, lines 36-38). In this regard, as acknowledged during the telephone interview of April 26, 2011, WELLS does not appear to disclose that a class of the FLASH memory, a number of clusters of each searched block of the FLASH memory, a number of used clusters of each searched block of the FLASH memory, or a size of each searched block of the FLASH memory is acquired from the FLASH memory. In this regard, since WELLS does not even appear to disclose that such information is acquired from the FLASH memory, it is further submitted that WELLS cannot be reasonably interpreted to disclose or render obvious that such information indicates information for determining a predetermined threshold number of unused clusters necessary for writing data at least at a predetermined minimum speed.

Accordingly, at least in view of the above and as acknowledged during the telephone interview of April 26, 2011, it is respectfully submitted that AAPA, WELLS, and STOPPANI, alone or in combination, fail to disclose or render obvious the claimed combinations of amended independent claims 1 and 6 of the present application. Therefore, it is respectfully requested that the rejection of independent claims 1 and 6 is withdrawn, and that these claims are indicated to be allowable in the next Official communication.

With respect to the rejection of dependent claims 2-3, 5, 7, 9, and 14-15, Applicants submit that these claims are all directly or indirectly dependent from one of allowable independent claims 1 and 6, which are allowable for at least the reasons discussed *supra*. Thus, these claims are submitted to also be allowable for at least the reasons discussed *supra*. Furthermore, these claims recite additional features which further define the present invention over the references of record.

With respect to new claims 16-25, these claims are also submitted to each be directly dependent from one of allowable independent claims 1 and 6, which are allowable for at least the reasons discussed *supra*. Thus, these claims are submitted to also be allowable for at least the reasons discussed *supra*. Furthermore, these claims recite additional features which further define the present invention over the references of record. For example, new claims 20 and 25 each generally recite that data is written to one of the searched blocks having less than the predetermined threshold number of unused clusters when none of the searched blocks has the predetermined threshold number of unused clusters. In this regard, according to the Examiner's interpretation of WELLS, any block in which writing of data actually occurs must have the minimum amount of free space. Accordingly, it is submitted that WELLS cannot be reasonably interpreted that to disclose that data is written in a block that has less than the minimum amount of free space, and thus, that new claims 20 and 25 cannot be reasonably interpreted to be rendered obvious by the combination of AAPA, WELLS, and STOPPANI.

At least in view of the above, it is respectfully submitted that each and every pending claim of the present application (*i.e.*, claims 1-3, 5-7, 9, and 14-25) meets the

CONCLUSION

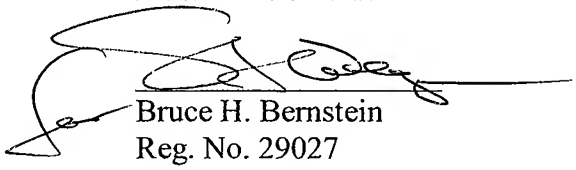
In view of the fact that none of the art of record, whether considered alone, or in any proper combination thereof, discloses or renders obvious the present invention as now defined by the pending claims, and in further view of the above amendments and remarks, reconsideration of the Examiner's action and allowance of the present application are respectfully requested and are believed to be appropriate.

Applicants note that this amendment is being made to advance prosecution of the application to allowance, and should not be considered as surrendering equivalents of the territory between the claims prior to the present amendment and the amended claims. Further, no acquiescence as to the propriety of the Examiner's rejection is made by the present amendment. All amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should an extension of time be necessary to maintain the pendency of this application, including any extensions of time required to place the application in condition for allowance by an Examiner's Amendment, the Commissioner is hereby authorized to charge any additional fee to Deposit Account No. 19-0089.

If there should be any questions concerning this application, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,
Hirokazu SO et al.



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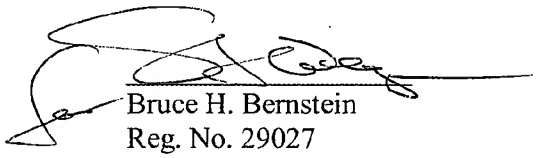

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